ABSTRACT

A coherence microscope has a divider (3) that divides light emitted by a light source (1) into measurement light, which is supplied to and reflected by a specimen (13), and reference light. A superimposition device (25, 31) superimposes the measurement light reflected by the specimen (13) with the reference light. A short sensor array (41) detects the light resulting from the superimposition and permits a read-out rate of at least about 60 kHz. The superimposition device has an emission device (25, 31) for emitting the measurement light and the reference light arranged to effect extensive irradiation of the sensor array (41) with superimposed light. The ratio of distances covered by the measurement light and the reference light from the emission device (25, 31) to impingement points on the sensor array (41) varies in the portion of the sensor array (41) that is irradiated with superimposed light.